



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

# SCIENCE

EDITORIAL COMMITTEE : S. NEWCOMB, Mathematics ; R. S. WOODWARD, Mechanics ; E. C. PICKERING, Astronomy ; T. C. MENDENHALL, Physics ; R. H. THURSTON, Engineering ; IRA REMSEN, Chemistry ; J. LE CONTE, Geology ; W. M. DAVIS, Physiography ; O. C. MARSH, Paleontology ; W. K. BROOKS, Invertebrate Zoology ; C. HART MERRIAM, Vertebrate Zoölogy ; S. H. SCUDDER, Entomology ; N. L. BRITTON, Botany ; HENRY F. OSBORN, General Biology ; H. P. BOWDITCH, Physiology ; J. S. BILLINGS, Hygiene ; J. McKEEN CATTELL, Psychology ; DANIEL G. BRINTON, J. W. POWELL, Anthropology.

FRIDAY, JULY 12, 1895.

## CONTENTS :

<i>The Sun</i> : DAVID P. TODD.....	29
<i>Current Notes on Physiography (XII.)</i> :—.....	39
Recent Geographical School Books; Teay Valley, West Virginia : W. M. DAVIS	
<i>Zoölogical Notes</i> :—.....	41
<i>Monograph of the Crinoids; Fishes of the Colorado Basin. Skeletons of Zeuglodon</i> : F. A. L.	
<i>Scientific Notes and News</i> :— .....	43
<i>Botanical Survey of Nebraska; M. André's Polar Expedition; The Upper Regions of the Atmosphere; Lightning in the United States; General</i> .	
<i>Educational and University News</i> .....	47
<i>Correspondence</i> :—.....	48
<i>A Bibliography of Scientific Literature</i> : A. RAM-SAY. <i>Hack Tuke Memorial</i> : G. F. BLANDFORD.	
<i>Scientific Literature</i> :—.....	51
<i>L'Année psychologique</i> : E. B. DELABARRE. <i>Iowa Geological Survey</i> : J. F. KEMP. <i>Hygiene</i> .	
<i>Scientific Journals</i> :— .....	55
<i>The American Geologist; The Monist</i> .	
<i>New Books</i> .....	56

MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Prof. J. McKeen Cattell, Garrison on Hudson, N. Y.  
Subscriptions and advertisements should be sent to SCIENCE, 41 N. Queen St., Lancaster, Pa., or 41 East 49th St., New York.

## THE SUN.

"It is because the secrets of the Sun," says Mr. Lockyer, "include the cipher in which the light messages from external Nature in all its vastness are written, that those interested in the 'new learning,' as the chemistry of space may certainly be considered, are anxious to get at and possess them." But even more significant to dwellers on the Earth are the heat radiations of the Sun, because they are determini-

nant in all animal and vegetable life, and are the original source of nearly every form of terrestrial energy recognized by mankind. Through the action of the solar heat-rays the forests of palæozoic ages were enabled to wrest carbon from the atmosphere and store it in forms afterward converted by Nature's chemistry into peat and coal; through processes incompletely understood, the varying forms of vegetable life are empowered to conserve, from air and soil, nitrogen and other substances suitable for and essential to the life maintenance of animal creatures. Breezes operant in the production of rain and in keeping the air from hurtful contamination; the energy of water, in stream and dam and fall; trade winds facilitating commerce between the continents; oceanic currents modifying coast climates (and no less the tornado, the waterspout, the typhoon, and other manifestations of natural forces, excepting earthquakes, frequently destructive to the works of man), all are traceable primarily to the heating power of the Sun's rays acting upon those readily movable substances of which the Earth's exterior is in part composed.

The Sun, cosmically speaking, is simply a star, but the nearest fixed star is 275,000 times more remote ; so that the Sun's vastly greater brightness is, for the most part, due to mere proximity. Still, the distance of the Sun is by no means easy to conceive or